

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>91-292</u> DATE: BEGIN <u>12/29/91</u> PAGE <u>1 / 1</u> JOB NO. <u>176-S31</u> COMPLETE <u> </u> Thin Walled Tube <u> </u> PROJECT <u>G.I. WW</u> ☒ 3" ☐ 6" LOCATION <u>Sargeant Beach Sta 232+50</u> ELEVATION OF HOLE <u> </u> MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Failing CF D2</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. <u> </u> ft., at end of Drilling WEATHER <u>Warm Clear</u> DRILLER <u>D. Gagan</u> LOGGER <u>D. Cravell</u>				
		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS			
0									
1	0.75	Gray	Clay	Medium stiff	silt	Roots			
2	0.25	Gray	Clay	soft	silt	Roots			
5	0.25	Gray	Clay	"	silt	Tan			
4	0.25	Tan	Clay	"	silt	Gray			
10	0.50	Tan	Clay	Medium stiff	silt	Gray			
6	1.0	Tan	Clay	stiff	silt	Gray			
7	1.0	Tan	Clay	stiff	silt	Gray			
15	1.0	Tan	Clay	stiff	silt	Gray			
9	1.5	Gray	Clay	stiff	silt	Tan			
18	2.0	Gray	Clay	stiff	silt	Tan			
20	2.0	Gray	Clay	V. stiff	silt	Calc. nod			
12	2.5	Tan	Clay	V. stiff	silt	Calc. nod			
25	2.5	Tan	Clay	V. stiff	silt	Calc. nod			
						Bottom of 91-292 @ 26'			
30									
35									

Project : Gulf Intracoastal Waterway, near Sargent Beach, Texas
Contract No. DACW64-92-D-0001 Delivery No. 0005

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-292

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	M c (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	LL (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0-2	1.00		Gray, Clay, Stiff, w/roots	CH	30.9										0.50	
2	2-4	0.75		Gray, Clay, Medium stiff	CH	30.8										0.35	
3	4-6	0.50		Gray, Clay, Medium stiff, w/sand parting & blocky structure	CH	29.5	91.9	119.0	50	20	100.0	99.9	98.8	97.5	95.7	0.25	0.26
4	6-8	0.25 <i>S-1, B</i>		Tan & gray, Clay, Soft, Silty <i>SWD</i>	CL	<i>42.7</i>	<i>79</i>		<i>77</i>	<i>24</i>					<i>99</i>		
5	8-10	0.75		Brownish gray, Clay, Medium stiff	CH	42.4										0.30	
6	10-12	0.75		Brown, Clay, Medium stiff, slickensided	CH	37.5											
7	12-14	1.00		Brown, Clay, Stiff, slickensided	CH	36.7											
8	14-16	1.25		Brown, Clay, Stiff	CH	34.7			72								
9	16-18	1.50		Olivegray, Clay, Stiff, w/blocky structure, slickensided	CH	32.2											
10	18-20	1.50		Olivegray, Clay, Stiff, w/blocky structure, slickensided	CH	28.1											
11	20-22	2.50		Gray, Clay, Very stiff, w/calcareous nodules	CH	26.7			73								
12	22-24	1.75		Brown & gray, Clay, Stiff, w/calcareous nodules & ferrous stains, slickensided	CH	28.3											
13	24-26	2.50		Brown & gray, Clay, Very stiff, w/calcareous nodules and ferrous stains, slickensided	CH	36.1											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content

q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of pipe

JOB NO. 14G533

DATE 1/30/92

PROJECT Gulf Intracoastal Waterway near Sargent Beach, Texas

BORING NO. 91-292

SAMPLE NO. 3

DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION

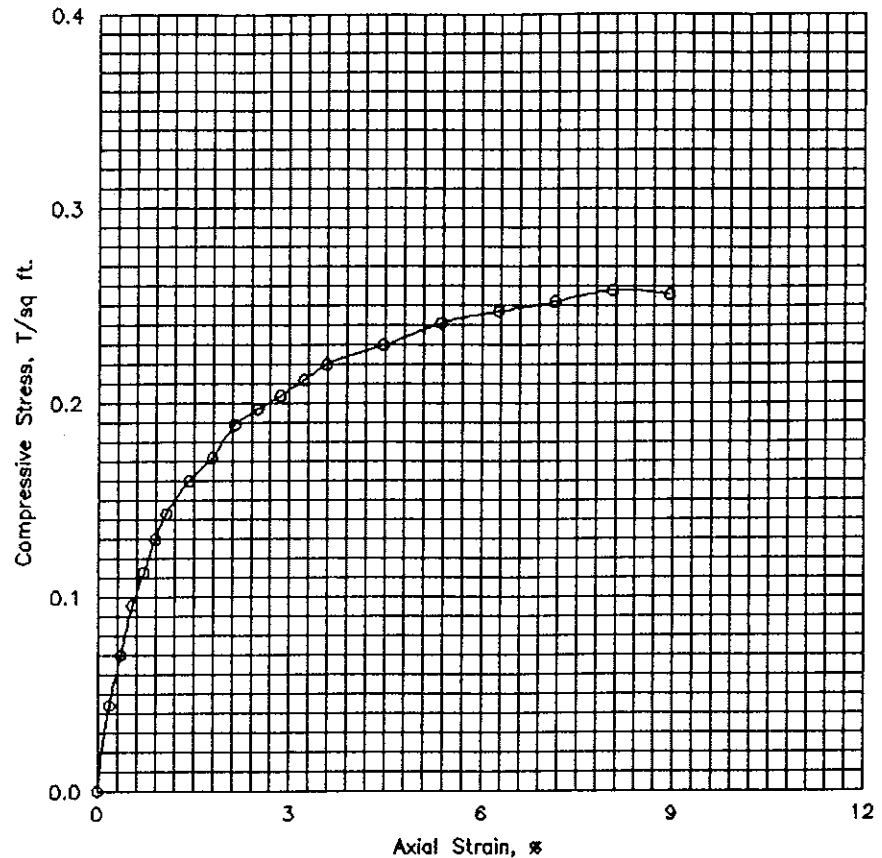
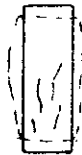
Gray, Clay, Medium stiff, w/sand parting & blocky structure

Tare No.	P-226	Height	5.595 in.
Tare plus Wet Specimen	499.16 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	395.20 gm	Initial Area	6.290 sq in.
Water Weight	103.96 gm	Volume	35.194 cu in.
Tare Weight	42.79 gm	Volume of Solids	cu in.
Wet Specimen	1099.76 gm	Void Ratio	%
Dry Specimen	849.24 gm	Saturation	91.9 lb/cu ft
Water Content	29.50 %	Dry Density	
Specific Gravity of Solids			
LL = 50	PL = 20	PI = 30	

Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

Elapsed Time min.	Dial Reading 0.001"	Cumulative Change in.	Proving Ring Dial Reading	Axial Load lb	Axial Strain	Area Corr. sq in.	Compr. Stress tsf
.0	0.	.000	.0	.0	.000	6.29	.000
.2	10.	.010	5.0	3.8	.002	6.30	.044
.3	20.	.020	8.0	6.1	.004	6.31	.070
.5	30.	.030	11.0	8.4	.005	6.32	.096
.7	40.	.040	13.0	10.0	.007	6.34	.113
.8	50.	.050	15.0	11.5	.009	6.35	.130
1.0	60.	.060	16.5	12.6	.011	6.36	.143
1.3	80.	.080	18.5	14.2	.014	6.38	.160
1.7	100.	.100	20.0	15.3	.018	6.40	.172
2.0	120.	.120	22.0	16.9	.021	6.43	.189
2.3	140.	.140	23.0	17.6	.025	6.45	.197
2.6	160.	.160	24.0	18.4	.029	6.48	.204
3.0	180.	.180	25.0	19.1	.032	6.50	.212
3.3	200.	.200	26.0	19.9	.036	6.52	.220
4.1	250.	.250	27.5	21.1	.045	6.58	.230
4.9	300.	.300	29.0	22.2	.054	6.65	.241
5.7	350.	.350	30.0	23.0	.063	6.71	.247
6.5	400.	.400	31.0	23.7	.071	6.77	.252
7.3	450.	.450	32.0	24.5	.080	6.84	.258
8.1	500.	.500	32.0	24.5	.089	6.91	.256

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	29.5 %		
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	91.9		
Time to failure, min		t_f	7.30		
Unconfined compressive strength, T/sq ft		q_u	.26		
Undrained shear strength, T/sq ft		S_u	.13		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Medium stiff, w/sand parting					
LL	50	PL	20	PI	30
Remarks		Project Gulf Intracoastal Waterway Area Near Sargent Beach, Texas Boring No. 91-292 Sample No. 3 Depth 4-6 ft Date 1/30/92 El			
UNCONFINED COMPRESSION TEST REPORT					